

**REMARKS**

In the Office Action, the Examiner rejected claims 1-13, 15-18, 20-25, 27, and 29 and objected to claims 14, 19 and 26. By the present response, claims 1, 9, 13-15, 17-20, 23, 25-27, and 29 are amended, claims 2-6, 11-12, 22, and 28 are canceled, and claims 30-39 are added. Upon entry of these amendments, claims 1, 7-10, 13-21, 23-27, and 29-39 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

**Rejections Under 35 U.S.C. § 102**

The Examiner rejected claims 1, 9, 13, 16-18, 23-25 and 29 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,807,248 (the "Mihara reference"). In addition, the Examiner rejected claims 1, 9, 10, 17 and 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,637,040 (the "Sohval reference"). Applicants respectfully traverse these rejections.

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (Emphasis added). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

*The Mihara Reference*

In the present case, the Mihara reference does not anticipate Applicants' claims under 35 U.S.C. § 102(e) because every element of the claimed invention is not identically shown in the Mihara reference. In particular, independent claims 1, 17, 23, and 29, as amended, generally recite a *rotatable* detector array. (Emphasis added). Such a rotatable detector array is discussed in the application at least at page 6, lines 28-31.

The Mihara reference, conversely, discloses a fixed sensor array which surrounds the subject. *See* Mihara Fig. 5, (sensor array 13), Abstract, and col. 2, lines 20-24, col. 5, lines 60-63, col. 6, lines 10-14, col. 14, lines 53-65. Indeed, as described in the Mihara reference, the detector is arranged as a ring past which X-rays are transmitted on one side to be detected on the opposite side of the patient. *See id.* at Figs. 5, 10, 14, and 21 (sensor array 13 and detector 260), col. 6, lines 10-14, col. 14, lines 62-65. Clearly, the Mihara reference does not contemplate or disclose the rotation of such a ring shaped detector as such rotation is unnecessary in view of the detector's presence about the entire field of view. Therefore, absent some showing by the Examiner that this recited subject matter is present in the Mihara reference, no *prima facie* case of anticipation based on the Mihara reference exists for independent claims 1, 17, 23, and 29 or their dependent claims. Withdrawal of the rejection under 35 U.S.C. § 102 in view of Mihara is, therefore, respectfully requested.

*The Sohval Reference*

With regard to the Sohval reference, the Applicants respectfully note that independent claims 1 and 17, as amended, generally recite that the two or more emission points of the X-ray source are offset from one another such that the emission points sample substantially different portions of the field of view. Support for this subject matter can be found in Figs. 2-7 and 9 and in the accompanying text of the application. *See* Application, p. 11, line 18 to page 14, line 31; page 15, line 26 to page 16, line 23.

The Sohval reference, conversely, describes the use of emission points that do not sample substantially different portions of the field of view. Instead, the Sohval reference provides “a method of improving the spatial resolution of images reconstructed by the scanner [that] includes *increasing the sampling density by interleaving radiation beams between adjacent radiation beams* continuously as the source and the detector means are rotated.” Sohval, col. 5, lines 13-18. Emphasis added. Indeed, the emissions from the first and second focal spot described in the Sohval reference occur at *substantially the same* azimuthal position, thereby interleaving the emission of the first and second focal spots and doubling the sampling density. See Sohval, Figs. 3 and 4, and col. 5, lines 25-37, col. 9, lines 49-57, col. 10, lines 8-13. Emphasis added. Indeed, by way of example, Sohval describes an optimal displacement between focal spots which is only 1.26 mm. Sohval, col. 5, lines 42-58. Because the emissions between the first and second focal spots of the Sohval reference occur at substantially the same azimuthal position, they are not sampling substantially different portions of the field of view. Indeed, if the emissions of Sohval reference were sampling substantially different portions of the field of view, they would not provide a doubling of the sampling density, a stated objective of the Sohval reference.

In view of these deficiencies in the Sohval reference, no *prima facie* case of anticipation based on the Sohval reference exists for independent claims 1 or 17, or for their dependent claims. Withdrawal of the rejection under 35 U.S.C. § 102 in view of Sohval is, therefore, respectfully requested.

### **Rejections Under 35 U.S.C. § 103**

The Examiner rejected claims 15, 20, and 27 under 35 U.S.C. § 103(a) as being obvious in view of the Mihara reference and U.S. Patent No. 6,507,639 (the “Popescu reference”). In addition, the Examiner rejected claims 7 and 8 under 35 U.S.C. § 103(a) as being obvious in view of the Mihara reference and U.S. Patent

No. 6,674,837 (the "Taskar reference"). The Applicants respectfully traverse these rejections.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

With regard to the rejection of dependent claims 15, 20, and 27 in view of Mihara and Popescu, as discussed above, the Mihara reference, as amended, fails to disclose a rotatable detector array. While the Popescu reference does appear to disclose such a rotatable detector 6, there is no basis, suggestion or other objective motivation for modifying the Mihara reference to include such a rotatable detector. In particular, the Mihara reference describes the use of *fixed* detector and X-ray generation mechanisms. Mihara, Abstract. Emphasis added. Specifically, Mihara

provides a ring shaped detector (13 and 260) which does not need to be rotated and, therefore, allows for faster scan speeds using the distributed X-ray source techniques described therein. Mihara, col. 18, lines 16-27. One would not be motivated to replace the ring detector of Mihara with a rotating detector, such as the one found in Popescu, since such a mechanism might prevent the attainment of higher scan speeds as taught in Mihara. Therefore, there would be no motivation to combine the Mihara and Popescu references in a manner which would disclose all elements of claims 15, 20, and 27 in view of their respectively amended base claims.

With regard to the rejection of dependent claims 7 and 8 in view of Mihara and Taskar, neither reference discloses a rotatable detector array. Indeed, the Mihara reference discloses “a fixed sensor array” while the Taskar reference discloses a system that “can be implemented *without moving parts* and can be entirely electrically addressed.” Mihara, Abstract; Taskar, col. 2, lines 16-19. Emphasis added. In view of these deficiencies, the combination of the Mihara and Taskar references does not disclose all elements of dependent claims 7 and 8 and, therefore, no *prima facie* case of obviousness exists. Reconsideration and allowance of dependent claims 7 and 8 is, therefore, respectfully requested.

### **New Claims**

Independent claim 30 and dependent claims 31-39 have been added by the present amendment. Support for new claim 30 can be found in the Application at Figures 2-7 and page 11, lines 18-28. Support for new claim 31 can be found at Figures 3, 4, and 7, and at page 11, lines 18-28; and page 12, line 21 to page 13, line 7. Support for new claim 32 can be found at page 11, line 30 to page 12, line 5; page 14, lines 1-3; and page 16, lines 9-18. Support for new claim 33 can be found at page 11, line 30 to page 12, line 1; page 12, lines 5-6; page 14, lines 1-3; and page 16, lines 18-20. Support for new claim 34 can be found at page 11, line 30 to page 12, line 1; page 12, lines 5-7; and page 16, lines 18-20. Support for new claim 35

can be found at page 11, line 30 to page 12 line 1; page 12, lines 9-16; page 14, lines 3-5; and page 16, lines 20-23. Support for new claim 36 can be found at page 11, line 30 to page 12, line 16; page 14, lines 7-16; and page 16, line 25 to page 17 line 2. Support for new claim 37 can be found at page 19, line 21 to page 20, line 11. Support for new claim 38 can be found at Figures 2-7. Support for new claim 39 can be found at Figures 3, 4, 6, 7, and at page 15, line 26 to page 17, line 2.

### **Conclusion**

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. Furthermore, per the brief discussion between the undersigned and the Examiner which occurred on March 13, 2006, the Applicants respectfully request a telephonic interview to discuss the present amendments at the Examiner's convenience. The Examiner is invited to contact the undersigned at the telephone number listed below to arrange the requested interview.

### **Fees currently dues and Authorization for Extensions of Time**

Applicants hereby request a one-month extension from February 18, 2006 to March 18, 2006 for the filing of the present Response. The Commissioner is, therefore, authorized to charge the requisite fee of \$ 120 for a one-month extension, the requisite fee of \$ 200 for an additional independent claim, the requisite fee of \$ 100 for two additional claims in excess of twenty, and any additional fees which may be required, to Deposit Account No. 07-0868; Order No. 129405-1/GERD:0049/YOD/RAR.

Furthermore, in accordance with 37 C.F.R. § 1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as

incorporating a request thereof. The Commissioner is authorized to charge the requisite fee associated with any such extension to the Deposit Account No. provided above.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John M. Rariden", is written over a horizontal line.

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